

**CLAIMS:**

What is claimed is:

1. A processor for executing an instruction set comprising the designated instruction set, the processor comprising:

5 a program memory for storing program instructions including instructions from the designated instruction set;

a program counter for determining current instruction for processing;

registers for storing operand data specified by the program instructions; and

at least one instruction execution unit for executing the current instruction.

10 2. The processor according to claim 1, wherein the at least one execution unit includes a digital signal processing engine.

15 3. The processor according to claim 1, wherein the at least one execution unit includes an arithmetic logic unit.

4. The processor according to claim 1, wherein each designated instruction is identified to the processor by the designated encoding.